Contents

Preface vii

Conference Organization viii

Skyrmions and composite fermions for $g^* = 0$
R.J. Nicholas, D.R. Leadley, D.K. Maude, J.C. Portal, J.J. Harris and C.T. Foxon 1

Chiral Fermi liquids and a new version of the quantum Hall effect observed in organic conductors at very high magnetic fields
J. Singleton, N. Harrison, M.M. Honold, H. Yaguchi, C. Mielke, D. Rickel, I. Deckers, P.H.P. Reinders, F. Herlach, M. Kurmoo and P. Day 6

Effects of Skyrmion excitations on the temperature dependence of diagonal resistivity at $\nu = 1$ quantum Hall regime
T. Takamasu, G. Kido, M. Ohno, N. Miura, A. Endo, M. Kato, S. Katsumoto and Y. Iye 12

Study of spin-Peierls $CuGeO_3$ by high-field ESR
H. Nojiri, H. Ohta, N. Miura and M. Motokawa 16

NMR study of the high magnetic field incommensurate phase of the $CuGeO_3$ spin-Peierls system
M. Horvatić, C. Berthier, Y. Fagot-Revurat, N. Piegay, M.E. Hanson, G. Dhalenne and A. Revcolevschi 22

Magnetism in disordered spin-Peierls systems
M. Saito and H. Fukuyama 27

High field electron spin resonance experiments on spin–Peierls compounds
W. Palme, S. Schmidt, B. Lüthi, J.P. Boucher, M. Weiden, R. Hauptmann, C. Geibel, A. Revcolevschi and G. Dhalenne 32

Phase diagram of a new spin–Peierls compound: p-CyDOV
T. Hamamoto, Y. Narumi, K. Kindo, M. Mukai, Y. Shimobe, T.C. Kobayashi, T. Muramatsu and K. Amaya 36

Low-temperature transport measurements of superconductors and semiconductors in magnetic fields to 800 T
A.S. Dzurak, B.E. Kane, R.G. Clark, N.E. Lumpkin, J. O'Brien, G.R. Facer, R.P. Starrett, A. Skougarevsky, H. Nakagawa, N. Miura, D.G. Rickel, J.D. Goettee, L.J. Campbell, C.M. Fowler, C. Mielke, J.C. King, W.D. Zerwekh, D. Clark, B.D. Bartram, M. von Ortenberg, F. Herlach, H. Yokoi, A.I. Bykov, O.M. Tatsenko, V.V. Platonov, E.E. Mitchell, J. Hermann, K.-H. Müller, K.D. Maranowski and A.C. Gossard 40

Dirac II series in 800 T fields: Reflectivity measurements on low-dimensional, low electron density materials
J.S. Brooks, L. Engel, J. Cothern, J.A. Simmons, M.J. Hafich, W. Lewis, S. Gallegos, D. Devore, B. Marshall, M. Grover, G. Leach, C.H. Mielke, D. Rickel, D. Clark, M. Fowler, J. King, L. Tabaka, J. Detwiler, E.C. Clark, R.G. Clark, A. Dzurak, B. Kane, N. Miura, O. Tatsenko, V. Platonov and A. Bykov 50

The generation and application of megagauss fields at the Humboldt High Magnetic Field Center
O. Portugall, N. Puhlmann, H.U. Müller, M. Barczewski, I. Stolpe and M. von Ortenberg 54

Condensed matter physics for non-destructive 100 T magnets
G.S. Boebinger, S. Brazovskii and L.J. Campbell 61

A Leuven type coilin in a coilex for 100 T non-destructive magnets
S. Askénazy 67

On the origin of the de Haas–van Alphen effect in a superconductor
C. Haworth, S.M. Hayden, T.-J.B.M. Janssen, P. Meeson, M. Spring and A. Wasserman 73

De Haas–van Alphen effect in heavy fermions, high T_c superconductors, and quasicrystals
E.G. Haanappel 78

Many-body effect in an artificial atom
Y. Tokura, L.P. Kouwenhoven, D.G. Austing and S. Tarucha 83

High magnetic fields probing nanostructures: Magneto-condensation into quantum dots
M. von Ortenberg, K. Uchida, N. Miura, F. Heinrichsdorff and D. Bimberg 88

High field magnetoluminescence spectroscopy of self-assembled (InGa)As quantum dots on high index planes
R.K. Hayden, K. Uchida, N. Miura, A. Polimeni, S.T. Stoddart, M. Henini, L. Eaves and P.C. Main 93

Unconventional metals at low temperatures and high magnetic fields
A.H. Lacerda, C.H. Mielke, N. Harrison, W.P. Beyermann, A. Yatskar, P.C. Canfield, S.L. Bud'ko, G.M. Schmiedeshoff, M.S. Torikachvili, R.M. Vestal and L.K. Montgomery 97

Organic conductors: Fermi-surface and specific-heat studies
J. Wosnitza, G. Goll, D. Beckmann, S. Wanka, J.A. Schlueter, J.M. Williams, P.G. Nixon, R.W. Winter and G.L. Gard 104

Millimeter-wave spectroscopy of low-dimensional molecular metals in high magnetic fields
S. Hill, J.S. Brooks, J.S. Qualls, T. Burgin, B. Fravel, L.K. Montgomery, J. Sarrao and Z. Fisk 110

Field-induced change of the oscillation spectrum and angle dependence of the magnetoresistance in the quasi two-dimensional organic superconductor $(BEDO\text{-}TTF)_2ReO_4 \cdot H_2O$
A. Audouard, V.N. Laukhin, C. Proust, L. Brossard, N.D. Kushch and S. Askenazy 117

Rapid oscillation of Hall resistance in high field spin-density-wave phase for $(TMTSF)_2ClO_4$
S. Uji, J.S. Brooks, S. Takasaki, J. Yamada and H. Anzai 121

Demonstration of cantilever magnetometry in pulsed magnetic fields
M.J. Naughton, J.P. Ulmet, A. Narjis, S. Askenazy, M.V. Chaparala and R. Richter 125

U_2T_2X (T = Co, Ni, Rh, Pd, Ir, Pt; X = In, Sn) compounds in high magnetic fields
F.R. de Boer, K. Kindo, H. Nakotte, K. Prokeš and V. Sechovský 129

Effect of the magnetic field on the spin, charge and orbital ordered states in perovskite-type manganese oxides
Y. Tomioka, H. Kuwahara, A. Asamitsu, T. Kimura, R. Kumai and Y. Tokura 135

High-field magnetization of $CeRh_2Si_2$ and $CePd_2Si_2$
H. Abe, H. Kitazawa, H. Suzuki, G. Kido and T. Matsumoto 141

Metamagnetism of single crystal $Ca_3Ru_2O_7$ in high magnetic fields
S. McCall, G. Cao, J.E. Crow, N. Harrison, C.H. Mielke, A.H. Lacerda and R.P. Guertin 144

Anomalous magnetic properties of $Ce(Co_{1-x}Ni_x)_5$ due to Co metamagnetism
T. Goto, M.I. Bartashevich, A.V. Korolyov and A.S. Ermolenko 149

Magnets for the 21st century
F. Herlach 152

Four decades in the megagauss world
C.M. Fowler 158

Classical behaviour in the quantum liquid ^{3}He–^{4}He: Observation of a B^2 dependence of the surface relaxation
A.S van Steenbergen, J.A.A.J Perenboom, S.A.J. Wiegers, J.C. Maan 164

High-sensitivity measurements of magnetic anisotropy using harmonic oscillation
C. Uyeda, H. Chihara and K. Okita 171

Neutron diffraction experiments in repeating pulsed high magnetic fields
H. Nojiri, K. Takahashi, T. Fukuda, N. Arai, M. Arai and M. Motokawa 175

Ultrasonic technique for pulsed magnetic fields
B. Wolf, G. Bruls, I. Kouroudis, D. Finsterbusch, M. Sieling, S. Schmidt, W. Palme and B.Lüthi 179

Photoluminescence studies of quantum-well structures in pulsed magnetic fields
C.H. Perry, Y. Kim and D.G. Rickel 182

Photonic magneto-transport
G.L.J.A. Rikken, A. Sparenberg and B.A. van Tiggelen 188

Spin-flip transition and Faraday effect in antiferromagnet $KMnF_3$ in megagauss magnetic field
A.A. Mukhin, V. Platonov, V.I. Plis, A.I. Popov, O.M. Tatsenko and A.K. Zvezdin 195

Magneto-photoluminescence study on fractional quantum Hall effect in CdTe–CdMgTe modulation n-doped single quantum wells
S. Takeyama, H. Kunimatsu, K. Uchida, N. Miura, G. Karczewski, J. Jaroszynski, T. Wojtowicz and J. Kossut 200

Dynamical properties of excitons interacting with electrons heated by far-infrared cyclotron resonance in InGaAs
H. Nakata, N. Shimizu, T. Ohyama, Y. Nonogaki, Y. Fujiwara and Y. Takeda 204

Infrared spectroscopy with a pulsed high field magnet at a free electron laser
L. Van Bockstal, L. Li, C.J.G.M. Langerak, M.J. van de Pol, A. De Keyser, A.F.G. van der Meer, A. Ardavan, J. Singleton, R.J. Nicholas, F. Herlach, R. Bogaerts, H.U. Mueller and M. von Ortenberg 208

Exchange coupled hard magnetic materials in pulsed high magnetic fields
R. Grössinger and M. Dahlgren 213

High-field AFMR measurement of Nd_2BaNiO_5 in submillimeter wave region
S. Okubo, H. Ohta, M. Hayashi, H. Kikuchi, M. Motokawa and H. Nagasawa 219

High-resolution, high-field magnetization measurement in the diluted antiferromagnet $RbMn_cMg_{1-c}F_3$: New application of pulsed high fields to adiabatic magnetization processes
Y. Ajiro, T. Asano, H. Aruga-Katori, T. Goto, K. Koui, K. Kamishima and H. Ikeda 222

Metamagnetism and large magnetoresistance in $TbNi_2B_2C$
K.-H. Müller, A. Hindstein, D. Eckert, G. Fuchs, K. Nenkov, J. Freudenberger, M. Richter and M. Wolf 226

High-field magnetization processes of quantum double spin chain systems $KCuCl_3$, $TlCuCl_3$ and NH_4CuCl_3
H. Tanaka, W. Shiramura, T. Takatsu, B. Kurniawan, M. Takahashi, K. Kamishima, K. Takizawa, H. Mitamura and T. Goto 230

High-field magnetization process of a spin liquid system Cu_2(1,4-diazacycloheptane)$_2Cl_4$
M. Hagiwara, Y. Narumi, K. Kindo, T. Nishida, M. Kaburagi and T. Tonegawa 234

Exchange splitting of EPR spectra in $CuGeO_3$ under ultra-high magnetic fields – theoretical analysis
S. Kokado, H. Nojiri, N. Miura and N. Suzuki 238

Magnetic phase diagram of $CuGe_{1-x}Si_xO_3$ studied by specific heat measurements
M. Hiroi, T. Hamamoto, M. Sera, H. Nojiri, N. Kobayashi, M. Motokawa, O. Fujita, A. Ogiwara and J. Akimitsu 242

Magnetostriction measurements of $CuGeO_3$ in high magnetic fields
K. Takehana, T. Takamasu, M. Hase, G. Kido and K. Uchinokura 246

Spin–Peierls states in high magnetic fields
I. Harada and S. Mori 250

High magnetic field study of pressure effect on the spin–spin coupling among excitons and Mn ions in 2D- and 3D-CdMnTe systems
H. Yokoi, Y. Kakudate, S. Fujiwara, S. Takeyama, H. Kunimatsu, K. Uchida, N. Miura, T. Schmiedel, S. Tozer, T. Wojtowicz, G. Karczewski and J. Kossut 254

Magnetic interactions with charge carriers in III–V diluted magnetic semiconductors
L. Van Bockstal, A. Van Esch, R. Bogaerts, F. Herlach, A. van Steenbergen, J. De Boeck and G. Borghs 258

Coexistence of excitons and Landau states in $In_{0.53}Ga_{0.47}As/InP$ quantum wells at room temperature
O. Jaschinski, J. Schoenes, M. Vergöhl, P. Bönsch and A. Schlachetzki 262

Periodically recurring wavefunction scarring and magneto-transport in quantum dots
Y. Okubo, N. Sasaki, Y. Ochiai, J.P. Bird, K. Ishibashi, Y. Aoyagi, T. Sugano, D. Vasileska, R. Akis and D.K. Ferry 266

Cyclotron resonance of electrons in 6H-SiC in high magnetic fields up to 50 T
M. Goiran, F. Engelbrecht, F. Yang, W. Knap, S. Huant, N. Negre, R. Barbaste, J. Leotin, R. Helbig and S. Askenazy 270

High magnetic field studies of quantum transport and cyclotron resonance on 2D gas in GaN/GaAlN heterojunction
S. Contreras, M. Goiran, W. Knap, F. Yang, H. Rakoto, R. Barbaste, J.L. Robert, J. Leotin, S. Askenazy, Q. Chen and M. Asif Khan 274

Magnetic oscillations in semiconductor polycrystals and powders with 2D-conductivity channels
V.A. Pogrebnyak and O.A. Gredeskoul 278

Coulomb gap shrinkage in compensated Si:(P, B) in high magnetic fields
M. Iqbal, J. Galibert, J. Léotin, S. Askénazy, S. Waffenschmidt, J. Wosnitza and H.v. Löhneysen 282

Magnetotransport measurements on modulation Si δ-doped pseudomorphic $In_{0.2}Ga_{0.8}As/GaAs$ quantum wells
A. Babinski, G. Li, and C. Jagadish 286

Far-infrared laser photoconductivity of n-GaAs multiple quantum wells in a pulsed magnetic field
R.J. Heron, R.A. Lewis, A.V. Skougarevsky, R.P. Starrett, R.G. Clark and M. Henini 290

Quantum tunneling of magnetization in Mn_{12} acetate clusters
J.A.AJ. Perenboom, J.S. Brooks, S.O. Hill, T. Hathaway and N.S. Dalal 294

Field-induced phase transition in Kish graphite
S. Uji, J.S. Brooks and Y. Iye 299

High-field phase transitions and Fermi surfaces in the organic conductor α-$(BEDT\text{-}TTF)_2KHg(SCN)_4$: Influence of the magnetic breakdown on evaluation of the effective mass and the scattering time
T. Sasaki, W. Biberacher and T. Fukase 303

Near quantum limit SdH and dHvA wave forms in low-dimensional metals
J.S. Brooks, P. Sandhu, J.S. Qualls, S. Hill and M. Tokumoto 307

Fermi surface study of α-(BEDT-TTF)$_2$MHg(SCN)$_4$ by cyclotron
K. Akioka, H. Ohta, S. Kimura, S. Okubo, K. Kanoda and M. Motokawa 311

Quantum jumps in magneto-optical effects and magnetization of rare-earth compounds in ultrahigh magnetic fields
O.M. Tatsenko, V.V. Platonov, A.I. Bykov, M.I. Dolotenko, A.K. Zvezdin, J.C. Solem, C.M. Fowler, J.D. Goettee, D. Rickel, L.J. Campbell, L. Veeser, M. Sheppard, A.H. Lacerda, J.C. King, P.J. Rodriquez, D.E. Bartram, R.G. Clark, B.E. Kane, A.S. Dzurak, G.R. Facer, N. Miura, T. Takamasu, H. Nakagawa, H. Yokoi, J.S. Brooks, L.W. Engel, L. Pfeiffer, K.W. West, A.W. Maverick, L.G. Butler, W. Lewis, C.H. Gallegos and B. Marshall 315

The Faraday effect in $Cd_{0.57}Mn_{0.43}Te$ in high magnetic field
V.V. Platonov, O.M. Tatsenko, A.I. Bykov, M.I. Dolotenko, J.C. Solem, C.M. Fowler, J.D. Goettee, D. Rickel, L.J. Campbell, L. Veeser, M. Sheppard, A.H. Lacerda, J.C. King, P.J. Rodriquez, D.E. Bartram, R.G. Clark, B.E. Kane, A.S. Dzurak, G.R. Facer, N. Miura, T. Takamasu, H. Nakagawa, H. Yokoi, J.S. Brooks, L.W. Engel, L. Pfeiffer, K.W. West, A.W. Maverick, L.G. Butler, W. Lewis, C.H. Gallegos and B. Marshall 319

Multi-megagauss spectroscopy in the visible and infrared wavelength range
N. Puhlmann, O. Portugall, M. Barczewski, I. Stolpe, H.-U. Müller and M. von Ortenberg 323

Anomalous temperature dependence of the cyclotron mass in n-type CdS at ultra-high magnetic fields
Y. Imanaka, N. Miura and H. Nojiri 328

Progress in high-T_c magnet development in Oxford
H. Jones, P.E. Richens, D.T. Ryan and R.M. Goodall 333

Progress in high-field pulsed magnets and conductor development in Oxford
H. Jones, M. Van Cleemput, A.L. Hickman, D.T. Ryan and P.M. Saleh 337

Mechanical analysis of poly-layer reinforcement schemes for pulse magnets
B.J. Gao, H.J. Schneider-Muntau, P. Pernambuco-Wise and Y. Eyssa 341

Systematic failure testing of carbon composite reinforced pulse magnets
P. Pernambuco-Wise, Y. Eyssa, B.L. Lesch and H.J. Schneider-Muntau 346

The Wisconsin Pegasus solenoid
P. Pernambuco-Wise, B.L. Lesch, H.J. Schneider-Muntau, T.P. Intrator, R.J. Fonck and G.R. Winz 350

A 94 GHz interferometer for use in establishing the upper critical field in YBCO
W.D. Zerwekh and J.D. Goettee 353

High sensitivity data acquisition during strong transient electromagnetic fields
H.-U. Müller, H. Scholz, N. Puhlmann, O. Portugall, M. Barczewski, I. Stolpe and M. von Ortenberg 356

Recent developments at the high-field laboratory of Tohoku University
M. Motokawa, K. Watanabe, S. Miura, S. Awaji, H. Nojiri, I. Mogi, S. Mitsudo and T. Sakon 360

New Nb_3Al multifilamentary conductor and its application to high field superconducting magnet
K. Inoue, Y. Iijima, T. Takeuchi, T. Kiyoshi, K. Fukuda, K. Nakagawa, G. Iwaki and H. Moriai 364

Ground-state magnetization curve of a generalized spin-1/2 ladder
T. Tonegawa, T. Nishida and M. Kaburagi 368

Magnetization process of the $S = 1$ ferromagnetic–antiferromagnetic alternating Heisenberg chain
R. Sato and K. Kindo 372

Anisotropic $S = \frac{3}{2}$ antiferromagnetic chain in a magnetic field
T. Sakai and M. Takahashi 375

Magnetic instability of Kondo insulators
P.S. Riseborough 378

Many body theory for the magnetic equation of state of a Fermi liquid
S. Misawa 382

Effect of illumination on transport properties of the high mobility 2D hole gas in Si–SiGe heterostructure
V.A. Stadnik, E.E. Mitchell, R.G. Clark, F.F. Fang, P.J. Wang and, B.S. Meyerson 386

Hall measurements of the insulating phases at $\nu = 1.5$ and $\nu \sim 0.5$ in p-type $Si/Si_{1-x}Ge_x$ heterostructures using pulsed magnetic fields
E.E. Mitchell, R.G. Clark, F.F. Fang, R.P. Starrett, A.V. Skougarevsky, P.J. Wang and B.S. Meyerson 391

Dirac series experiments in 800 T fields: Innovations for transport measurements
N.E. Lumpkin, B.E. Kane, A.S. Dzurak, R.G. Clark, R.P. Starrett, J. O'Brien, G.R. Facer, A.V. Skougarevsky, N. Miura, H. Nakagawa, K.D. Maranowski, A.C. Gossard, E.E. Mitchell and K.-H. Müller 395

The polaron effect in GaAs–(Al, Ga)As studied with a pulsed-field magnet: Free electron-laser combination
C.J.G.M. Langerak, L. Li, L. Van Bockstal, A. Ardavan, M.J. van de Pol, A.F.G van der Meer, F. Herlach, H.U. Mueller, R.J. Nicholas and J. Singleton 400

Chemical equilibrium in magnetic fields for ferromagnetic hydride and hydrogen system
I. Yamamoto, N. Deguchi, M. Yamaguchi, Y. Shimazu, F. Ishikawa and S. Miura 404

Magnetic field effects on sol–gel phase changes in aqueous polymers
I. Yamamoto, Y. Matsumoto, M. Yamaguchi, Y. Shimazu and F. Ishikawa 408

Magneto-electropolymerization of conducting polypyrrole
I. Mogi, K. Watanabe and M. Motokawa 412

Assignment of quasi-Landau levels in magneto-oscillatory spectra in cuprous oxide to classical unstable trajectories of hydrogen type atoms
K. Hammura, K. Sakai, M. Kobayashi and A. Misu 416

Transport and magnetic properties of GdNiBC
X.Z. Zhou, H.P. Kunkel, J.A. Cowen and G. Williams 421

Superconducting properties of chill-cast YNi_2B_2C
X.Z. Zhou, H.P. Kunkel, P.A. Stampe, J..A. Cowen and G. Williams 425

DC and AC magneto-resistance measurement technique for $YBa_2Cu_3O_{7-\delta}$ thin films in megagauss fields
H. Nakagawa, T. Takamasu, N. Miura and Y. Enomoto 429

Magnetization measurement of $YBa_2Cu_3O_y$ in high magnetic fields up to 30 T
N. Kobayashi, T. Nishizaki, T. Naito, S. Awaji and K. Watanabe 433

Anisotropy parameter for $Bi_2Sr_2CaCu_2O_{8+\delta}$ single crystal by magnetic torque measurements in high magnetic fields
S. Kawamata, K. Inoue, K. Okuda and T. Sasaki 437

Magnetic phase diagrams of UNiGe
H. Nakotte, I.H. Hagmusa, J.C.P. Klaasse, M.S. Torikachvili, A.H. Lacerda, E. Brück, K. Prokes and F.R. de Boer 441

Large magnetostriction and complex phase transition in UNiSn
T. Fujita, T. Aakazawa, H. Goshima, T. Tahara, T. Suzuki, T. Takabatake and H. Fujii 445

Magnetization of $Ce_3Pd_{20}Ge_6$ in high magnetic fields
T. Sakon, H. Nojiri, A. Ishiguro, N. Tateiwa, A. Sawada, T. Komatsubara and M. Motokawa 448

Cyclotron resonance experiments in $Yb_4(As_{0.6}P_{0.4})_3$ and $Yb_4(As_{0.71}Sb_{0.29})_3$
R. Pittini, H. Nojiri, M. Motokawa, A. Ochiai and T. Suzuki 452

High field magnetization of the new heavy fermion compound $U_{1.2}Fe_4Si_{9.7}$
S. Noguchi, K. Okuda, M. Abliz, K. Goto, K. Kindo, Y. Haga, E. Yamamoto and Y. Ōnuki 456

Microwave studies of low carrier state in Yb_4As_3
H. Matsui, T. Yasuda, A. Ochiai, H. Harima, H. Aoki, T. Suzuki and N. Toyota 460

Specific heat of a UPd_2Al_3 single crystal in fields up to 17.5 T
I.H. Hagmusa, J.C.P. Klaasse, E. Brück, A.A. Menovsky and F.R. de Boer 464

Development of magnetism in the $UNi_{1-x}Ru_xAl$ quasiternary
A.V. Andreev, M.I. Bartashevich, T. Goto, V. Sechovský, L. Havela and R.V. Dremov 468

Magnetic phase diagram and temperature dependent Ising-axis conversion of $DyCu_2$ single crystals
M. Loewenhaupt, M. Doerr, L. Jahn, T. Reif, C. Sierks and M. Rotter 472

Effect of dislocations on the high-field magnetoresistivity of compensated metals
V.V. Marchenkov, V.E. Startsev, Yu.N. Gornostyrev, L. Kratzwald, H.W. Weber, D.M. Tagirova, V.I. Levit and M.J. Kaufman 476

High-field transition in $TbCu_2$
A.V. Andreev, M.I. Bartashevich, T. Goto, M. Diviš and P. Svoboda 479

Energy level crossing and magnetocaloric effect in $YbPO_4$ in ultrahigh pulsed fields
Z.A. Kazei, N.P. Kolmakova, R.Z. Levitin, V.V. Platonov, A.A. Sidorenko and O.M. Tatsenko 483

Two-step-like magnetization curves of $YR(CoAl)_2$, R = Ho, Er, in fields up to 100 T
M.I. Bartashevich, T. Goto, I.S. Dubenko, N.P. Kolmakova, S.A. Kolonogii, R.Z. Levitin and A.S. Markosyan 487

Magnetic-field-induced collapse of charge ordering and its bandwidth dependence in $R_{1/2}Ca_{1/2}MnO_3$ (R = Pr, Nd and Sm)
M. Tokunaga, N. Miura, Y. Tomioka and Y. Tokura 491

Forced magnetostriction in itinerant metamagnets $Y(Co_{1-x}Al_x)_2$ and $Lu(Co_{1-x}Ga_x)_2$
T. Goto and M.I. Bartashevich 495

Itinerant electron metamagnetism in $Y_{1-x}Zr_xCo_3$
F. Ishikawa, M. Yamaguchi, I. Yamamoto, Y. Shimazu, M.I. Bartashevich and T. Goto 498

High-field magnetism of $TiBe_2$
H. Yamada and K. Terao 502

Anomalous singular-point-detection peak of monocrystalline YCo_4Al
C.V. Thang, T.Q. Vinh, N.P. Thuy and J.J.M. Franse 505

High field magnetization in an $S = 1$ antiferromagnetic chain with bond alternation
Y. Narumi, M. Hagiwara, R. Sato, K. Kindo, H. Nakano and M. Takahashi 509

Magnetization process of the alternating Heisenberg chains with ferromagnetic and antiferromagnetic interactions formed in $(CH_3)_2CHNH_3CuCl_3$
H. Manaka, I. Yamada, M. Tokunaga, T. Yasuhira and N. Miura 513

Magnetization measurements of the quasi-one-dimensional magnet $Sr_{14}Cu_{24}O_{41}$
M. Matsuda, K. Katsumata, Y. Narumi and K. Kindo 516

Mixed dysprosium-yttrium iron garnet, a new Ising magnet
A.S. Lagutin, G.E. Fedorov, A.V. Kopylov, J. Vanacken and F. Herlach 520

Magneto-optic properties of a thin $TbFe_2$ film studied by high magnetic field Kerr effect
M. Goiran, N. Nègre, S. Jaren, C. Meyer, R. Barbaste, A.R. Fert, J.C. Ousset and S. Askénazy 524

Shubnikov–de Haas oscillations in $CoSb_3$ single crystals under high magnetic fields
H. Rakoto, E. Arushanov, M. Respaud, J.M. Broto, J. Leotin, Ch. Kloc, E. Bucher and S. Askenazy 528

Magnetization measurements on fine cobalt particles
M. Respaud, J.M. Broto, H. Rakoto, J.C. Ousset, J. Osuna, T. Ould Ely, C. Amiens, B. Chaudret and S. Askenazy 532

Magnetic phase transition in $(Fe_{1-x}T_x)_3Ga_4$ alloys
H.J. Al-Kanani and J.G. Booth 537

First-principle ban calculation of FeSi under megagauss field
T. Arioka, E. Kulatov, H. Ohta, S. Halilov and L. Vinokurova 541

High-frequency high-field ESR of quantum double spin chain systems $KCuCl_3$ and $TlCuCl_3$
H. Tanaka, T. Takatsu, W. Shiramura, T. Kambe, H. Nojiri, T. Yamada, S. Okubo, H. Ohta, M. Motokawa 545

Single crystal EPR on Mn_{12}-acetate clusters
S. Hill, J.A.A.J. Perenboom, T. Stalcup, N.S. Dalal, T. Hathaway and J.S. Brooks 549

Submillimeter wave ESR of triangular-*kagome* antiferromagnet $Cu_9X_2(cpa)_6$ (X = Cl, Br)
S. Okubo, M. Hayashi, S. Kimura, H. Ohta, M. Motokawa, H. Kikuchi and H. Nagasawa 553

High field AFMR measurement of Bi_2CuO_4
H. Ohta, Y. Ikeuchi, S. Kimura, S. Okubo, H. Nojiri, M. Motokawa, S. Hosoya, K. Yamada and Y. Endoh 557

ESR study of the Haldane gap system Y_2BaNiO_5 in high magnetic fields
Y. Imanaka, N. Miura, H. Nojiri, S. Luther, M.V. Ortenberg, T. Yokoo and J. Akimitsu 561

Submillimeter wave ESR of an $S = 1$ bond alternating chain $Ni_2(\mu\text{-}C_2O_4)(\mu\text{-}N_3)(dpt)_2(PF_6)$
S. Kimura, S. Hayashi, H. Ohta, H. Kikuchi, H. Nagasawa, N. Nojiri and M. Motokawa 565

Submillimeter wave ESR study on triangular lattice antiferromagnet $CuFeO_2$
T. Fukuda, H. Nojiri, M. Motokawa, T. Asano, M. Mekata and Y. Ajiro 569

Field-induced spin reorientation and low-temperature structural phase transition in $La_{2-x}Sr_xCuO_4$
T. Goto, T. Suzuki, K. Chiba, T. Shinoda, M. Mori and T. Fukase 572

High field NMR on level crossover in spin-gap systems
M. Chiba, T. Fukui, Y. Ajiro, M. Hagiwara, T. Goto and T. Kubo 578

High-field ferromagnetic resonance in fine particles
M. Respaud, M. Goiran, F. Yang, J.M. Broto, T. Ould Ely, C. Amiens, B. Chaudret and S. Askenazy 580

Correlation effects in $Yb_4(As_{0.88}Sb_{0.12})_3$ and $Yb_4(As_{0.71}Sb_{0.29})_3$
R. Pittini, M. Ikezawa, A. Ochiai and T. Suzuki 584

List of Contributors 587

Subject Index 591